

### **ABSTRACT**

A system and method are disclosed that provide for transmitting data from a downhole location to the surface. In one embodiment, a communications medium provides data transfer capabilities to the surface. A first downhole instrument is associated with the communications medium in order to measure a first downhole parameter and transmit first data relative to the first downhole parameter to the surface via the communications medium at a first time. A second downhole instrument is associated with the communications medium in order to measure a second downhole parameter and transmit second data relative to the second downhole parameter to the surface via the communications medium at a second time such that the first data is interleaved with the second data.